

AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A process for producing enzyme particles comprising:

providing an emulsion of droplets of a first liquid phase dispersed in a second liquid phase, with the one liquid phase being a hydrophilic phase and the other liquid phase being a hydrophobic phase which is immiscible with the hydrophilic phase, and with enzyme molecules being located at or within interfacial boundaries of the droplets and the second liquid phase;

adding a cross-linking agent to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion;

adding a temporary protectant to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion;

cross-linking, by means of the cross-linking agent, the enzyme molecules of the respective droplets, wherein the temporary protectant occupies active sites of the enzyme during the cross-linking, thereby inhibiting occupation of, or reaction with, the active sites by the cross-linking agent, with so that individual stabilized enzyme particles, which are stable and in which the enzymes molecules are immobilized with a majority of active sites of the enzyme[[s]] molecules being orientated either towards the lumens of the particles or outwardly therefrom ~~internally or externally, are being formed~~ from individual droplets; and

recovering the individual enzyme particles from the second liquid phase.

2. **(Previously presented)** The process according to Claim 1, wherein the individual particles have openings so that the liquid phases can pass in or out of the particles.

3. **(Withdrawn)** The process according to Claim 1, wherein individual particles are liquid impervious.

4. **(Currently amended)** The process according to Claim 1, further comprising adding to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion, a modifier for modifying the hydrophobicity and/or charge of the enzyme, wherein the modifier is selected from the group consisting of an amino acid, a protein and a long chain hydrocarbon aldehyde.

5. **(Previously presented)** The process according to Claim 1, wherein the enzyme is a lipase.

6. **(Previously presented)** The process according to Claim 5, wherein the lipase is selected from the group consisting of *Pseudomonas cepacia* lipase, *Pseudomonas fluorescens* lipase, *Pseudomonas alcaligenes* lipase, *Candida rugosa* lipase, *Candida antarctica* lipase A, *Candida antarctica* lipase B, *Candida utilis* lipase, *Thermomyces lanuginosus* lipase, *Rhizomucor miehei* lipase, *Aspergillus niger* lipase, *Aspergillus oryzae* lipase, *Penicillium sp* lipase, *Mucor javanicus* lipase, *Mucor miehei* lipase, *Rhizopus arrhizus* lipase, *Rhizopus delemer* lipase, *Rhizopus japonicus* lipase, *Rhizopus niveus* lipase, and Porcine Pancreatic lipase.

7. **(Currently amended)** The process according to Claim 5, wherein the provision of the emulsion is effected by dissolving the enzyme in the hydrophilic or water (W) phase and forming the emulsion by mixing the enzyme containing hydrophilic phase with the hydrophobic or oil (O) phase.

8. **(Currently amended)** The process according to Claim 7, further comprising selectively precipitating the enzyme at the interface when the emulsion is an oil/water (O/W) emulsion in which hydrophobic phase droplets are dispersed in a continuous hydrophilic phase, or within the droplet volume, when the emulsion is a water/oil (W/O) emulsion in which hydrophilic phase droplets are dispersed in a continuous hydrophobic phase.

9. **(Canceled)** The process according to Claim 7, wherein the cross-linking of the enzyme molecules is effected by means of a cross-linking agent which is added to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion.

10. **(Canceled)** The process according to Claim 9, further comprising adding to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion, a temporary protectant that occupies active sites of the enzyme during the cross-linking, thereby inhibiting occupation of or reaction with the active sites by the cross-linking agent.

11. **(Previously presented)** The process according to Claim 7, further comprising adding an amino acid to the emulsion to inhibit agglomeration of the individual enzyme particles.

12. **(Canceled)** The process according to Claim 7, further comprising recovering the enzyme particles from the second liquid phase.

13. **(Previously presented)** The process according to Claim 7, further comprising extracting the first liquid phase from the enzyme particles.

14. **(Previously presented)** The process according to Claim 7, wherein the hydrophilic phase comprises water.

15. **(Previously presented)** The process according to Claim 7, wherein the hydrophilic phase comprises a polyethylene glycol.

16. **(Currently amended)** The process according Claim 7, wherein the hydrophobic phase comprises an oil[;], a hydrocarbon[;], an ether[;], or an ester.

17. **(Currently amended)** The process according Claim 7, wherein the emulsion is a W/O emulsion in which hydrophilic phase droplets are dispersed in a continuous hydrophobic phase, with a second enzyme, a co factor and/or a reaction mediator being present in the hydrophilic phase.

18. **(Withdrawn)** The process according to Claim 5, wherein a triglyceride, which is hydrolysable by lipase, is used as the hydrophobic phase, with an O/W emulsion, in which hydrophobic phase droplets are dispersed in a continuous hydrophilic phase, being formed and with the dispersed hydrophobic phase contained within the cross-linked particles being hydrolyzed by the lipase during and after the cross-linking reaction.

19. **(Currently amended)** The process according to Claim 7, wherein said process comprises, prior to cross-linking, (1) the formation of an initial O/W emulsion, in which hydrophobic phase droplets are dispersed in a continuous hydrophilic phase, (2) is formed, with the process including, before effecting the cross-linking, centrifuging centrifugation of the emulsion and separation of separating a concentrated emulsion from a dilute hydrophilic phase, to increase lipase purity[;], and (3) the inversion of inverting the emulsion to form a W/O an emulsion in which hydrophilic phase droplets are dispersed in a continuous hydrophobic phase, by the addition of a surfactant with a lower hydrophilic-lipophilic balance (HLB) value.

20. **(Currently amended)** The process according Claim 1, wherein, to impart specific properties to the enzyme particles, a modifier is added to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion, wherein the modifier is selected from the group consisting of an amino acid, a protein and a long chain hydrocarbon aldehyde.

21. **(Currently amended)** The process according to Claim 20, wherein ~~the modifier is a surfactant, for imparting enhanced enzyme activity and improved emulsion stability,~~ is added to the hydrophilic phase and/or to the hydrophobic phase and/or to the emulsion.

22. **(Withdrawn)** The process according to Claim 20, wherein the modifier is a precipitator for precipitating the enzyme onto the emulsion interfaces.

23. **(Withdrawn)** The process according to Claim 20, wherein the modifier is an additive for modifying the pH; ionic strength; viscosity; magnetic properties; agglomeration tendency; and/or zeta potential of the emulsion and/or the enzyme particles.

24.-29. **(Canceled)**

30. **(Previously presented)** The process according to Claim 14, wherein the hydrophilic phase further comprises a buffer in the water.

31. **(Previously presented)** The process according to Claim 15, wherein the hydrophilic phase further comprises water admixed with the polyethylene glycol.